



# Untold Story of an Intercontinental Pioneering Neurosurgeon: Vahdettin Turkman, M.D.

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## ABSTRACT

**AIM:** To present one of neurosurgery's earliest pioneers, Dr. Vahdettin Turkman, who contributed to neurosurgical practice globally from east to west (Iraq, Turkey, England, Germany and the United States) in the early 1960s.

**MATERIAL and METHODS:** This paper is the result of numerous interviews conducted in Turkey, Iraq, USA, and Canada.

**RESULTS:** During Dr. Turkman's brief life, he accomplished a great deal that contributed to the global advancement of modern neurosurgery.

**CONCLUSION:** Dr. Turkman's contributions and achievements have inspired many neurosurgeons trained at Ankara and Hacettepe Universities, Neurosurgery Departments in Turkey, and around the world. We honor Dr. Turkman and pay tribute to his memory.

**KEYWORDS:** Global neurosurgery, History of neurosurgery, Pioneers of neurosurgery, Turkish neurosurgery

**ABBREVIATION: USA:** United States of America

## INTRODUCTION

The history of neurosurgery is littered with pioneers who established the science and inspired future generations to practice evidence-based neurosurgery worldwide. Many of these neurosurgeons have already been recognized, but there are still undiscovered revolutionary heroes whose achievements continue to inspire future generations. In the early 1960s, one of neurosurgery's earliest pioneers, Dr. Vahdettin Turkman, contributed to neurosurgical practice globally from east to west. This paper is the result of numerous interviews conducted in Turkey, Iraq, USA (United States of America), and Canada, for which Prof. Dr. Selçuk Palaoğlu was tasked by the late Prof. Drs. Aykut Erbençi and Vural Bertan. During his brief life, Dr. Turkman accomplished a great deal that contributed to the global advancement of modern neurosurgery.

## Turkman's Life and Career

Vahdettin Tevfik Turkman was born on December 30, 1924, in Kirkuk, Iraq, to the Sheyhlerzade Turkman family. He graduated from the Faculty of Medicine at Istanbul University, Turkey, in 1947 (Figure 1). He returned to Iraq after graduation and joined the army to complete his military service (Figure 2). Because of his strong interest in neurosurgery, he decided to pursue a residency program in the USA. He specialized in neurosurgery at the University of Pennsylvania, USA, under the supervision of Dr. Francis Grant at the University of Pennsylvania Graduate Hospital (8).

Dr. Turkman intended to continue his career in Iraq after specializing in neurosurgery. He returned and worked there for a time (Figure 3) but was forced to leave due to political issues in Iraq in 1958. He relocated to Turkey and began the visa application process to return to the USA. The larger goal of Dr. Turkman was to continue his research and improve



**Figure 1:** Dr. Turkman (date unknown).



**Figure 2:** Dr. Turkman’s military ID (translated from Arabic: Iraq military forces group no 430; Class/military rank: Doctor/leader; Name & Father Name: Wahdeddin Tawfiq; Folder No: 105; Date & Place of Birth: Kirkuk/1924; Date of participation to the army: 03/02/1948. Signed by the staff colonel).



**Figure 3:** Dr. Turkman (date unknown).

neurosurgical practice. It is known that he worked in England and Germany for a time, but no precise information is available. While in Turkey, he was invited to establish the Neurosurgery Department at Hacettepe Children’s Hospital. He established and contributed to the department until he moved to the USA in the spring of 1960, where he worked until his death (Figure 4).

Dr. Turkman married Kirsten Violet Pedersen, a nurse, in August 1962 (Figure 5). Yasemin and Erik Faik were their two children (Figure 6). He got his helicopter pilot’s license (registered on the USA Civil Aircraft List; Figures 7 and 8) so he could fly to nearby hospitals for neurosurgical emergencies. He enjoyed tea, music (particularly Beethoven), and horseback riding as hobbies. Dr. Francis Wood (“Frank”), a friend from his residency at the University of Pennsylvania, recalls them riding together fondly. Their residency program left little time for leisure, but when their schedules could be coordinated, they enjoyed renting horses for an hour and riding in the Philadelphia suburbs. They would find an open field, and Frank joked that “Turk” (Dr. Turkman’s nickname) would gallop



**Figure 4:** Dr. Turkman (date and location unknown).



**Figure 5:** Dr. Turkman and his wife, pregnant with Yasemin (date and location unknown).

his horse like a “Turkish Calvary charge.” They would return to the stables with Turk’s horse “all lathered up.” Dr. Turkman is remembered as a witty man who could connect with people from all walks of life.

On August 27, 1965, Dr. Turkman was killed in a car accident while driving to the hospital for an emergent case of subarachnoid subdural hematoma. He was 40 years old. His wife was pregnant with his second child (Erik Faik) and sadly, they never met. Dr. Turkman was laid to rest in Pittsburgh, Pennsylvania (Figure 9) (10).



Figure 6: Dr. Turkman with his daughter, Yasemin (1963/1964 in Pittsburgh, PA).

## TURKMAN’S PROFESSIONAL ACHIEVEMENTS and CONTRIBUTIONS

### The United States (the First Period)

Dr. Turkman’s achievements in neurosurgery during his brief career stand out. Unfortunately, the specifics of his contributions are lost in the memories of his family, friends, and even patients. Furthermore, records of training from that time period are scarce, as neurosurgery training was in its early stages in the early 1950s, and formal residency programs in the USA were not well developed.



Figure 7: The registry of Dr. Wahdeddin Turkman on the United States Civil Aircraft List.

2187E	TAC5761	211	01	46	2	170	03	2	1	1	MCMAHON LELAND S	RT 2	REEDSVILLE	NC
2187F	U2050387	207	33	65	2	170	32	2	1	3	AIRCRAFT CHARTERS INC	6151 TELEPHONE RD	HOUSTON	TX
2187G	51487	207	27	58	2	170	26	2	1	3	BOHMER FLYG SVC INC	BLUE GRASS FLD	LEXINGTON	KY
2187H	2810	042	03	46	2	170	05	2	1	1	WHITE JOSEPH G	437 MARY ST	MARCOPA	CA
2187K	4424	419	01	47	2	170	08	2	1	1	PATTERSON A W	4924 CLIFF WY	MARCATA	CA
2187N	12423	207	16	47	2	170	08	2	1	1	CLEMENTS D J	3 SOUTHEAST ST	MORGAN CITY	LA
2187V	14416	207	16	48	2	170	09	2	1	1	KLEFKNER CHARLES R	RD 1	NEW MILFORD	PA
2187X	1370087	207	57	65	3	170	25	2	2	9	EXECUTIVE FLIGHT INC	PO BOX 8146	TULSA	OK
2187Z	18051287	207	26	63	2	170	26	2	1	1	BENNETT JACK	927 SOUTH HULETT AVE	HORSHEADS	NY
21875	2880	710	05	38	2	170	08	2	1	1	FRASER RICHARD F	411 PALMER AVE	PALMER	NY
21877	2657	710	05	38	2	415	05	2	1	1	MCMAHON LELAND S	R 2	REEDSVILLE	NC
2188A	20895	710	02	52	2	415	08	2	1	1	OLSON MARTIN L	BOX 166	NOME	AK
2188H	6635	814	01	49	2	170	08	2	1	3	HURRICANE FLG CLUB INC	RT 1 BOX 259 A	HURRICANE	WV
2188C	16173	207	31	56	2	350	07	2	1	1	BRAMLETT INC HOLTSON	R R 1 RTE 202	TIPP CITY	OH
2188E	TAC5762	211	01	46	2	170	03	2	1	2	BT 13 FLYING CLUB	619 MICH AVE	MONROE	MS
2188G	51488	207	27	58	2	170	26	2	1	3	GREEN KENNETH H INC	50 KEARNEY RD	NEEDHAM HTS 94	MA
2188N	12424	207	16	47	2	170	08	2	1	1	KAZMERSKI JOHN T	4501 E 10 ST	TUCSON	AZ
2188P	23797	710	23	56	3	415	08	2	2	1	FERGON PETER P JR	R 14 ST	BANGOR	ME
2188U	350	144	05	64	4	415	14	2	1	1	TURKMAN WAHDEDDIN T	120 N LANG AVE	PITTSBURGH	PA
2188X	1370088	207	57	65	3	415	15	2	2	6	CESSNA ACFT CO	5800 PAWNEE RD	WICHITA	KS
2188Z	18051288	207	26	63	2	170	26	2	1	3	MIAMI ACFT INC	MUNI ACFT	MIAMI	OK
21881	2659	710	05	38	2	170	08	2	1	1	PICKELL JACK W	POSTMASTER P O	WARREN	IO
21884	4425	710	06	38	2	170	05	2	1	1	TODKER JUNIOR C	NORTH PERRY AIRPORT	LONDON	OH
21885	2666	710	05	38	2	170	03	2	1	2	CARUL CITY FLYING CLUB INC	308 BUTTERNUT AVE	WEST HOLLYWOOD	FL
21888	2667	710	05	38	2	415	02	2	1	1	MARTINEK RICHARD W	ST PAUL PARK	ST PAUL PARK	WV
2188A	22606	710	22	52	2	415	06	2	1	1	HONTER GRADY L	709 S SAMPSON AVE	DUNN	NC
2188B	6616	819	01	49	2	170	08	2	1	1	FLEEMAN PHIL L	24 HUTTON AVE APT 33	WEST ORANGE	NJ
2188C	16174	207	31	55	2	350	06	2	1	1	BURKHARTSMEIER EDWARD A	NO 6 THIRD ST	MENOT	ND
2188D	03536	115	15	53	2	170	14	2	1	1	SARA F I MG	B W HARRISON	BOZEMAN	MT
2188E	TAC5763	211	01	46	2	170	03	2	1	3	RASOR WALTER A	R R 2	BROCKVILLE	OH
2188F	U2060389	207	33	65	2	170	32	2	1	9	CESSNA ACFT CO	5800 PAWNEE RD	WICHITA	KS
2188G	51489	207	27	58	2	170	26	2	1	3	JOHNSON INC WALLACE E	875 BAYNER	MEMPHIS	TN
2188H	2812	042	03	46	2	170	08	2	1	3	GRAYSON KEWETH S	40 DDN STREET	EAST PATCHOGUE L I	NY
2188P	23798	710	23	56	3	415	08	2	2	1	WALKER MARVIN	BOX 435 209 S MAIN	CLNEY	IL
2188U	400	144	05	64	4	415	15	2	1	1	COOK PERCY LEE	190 BELLMORE RD	MANSFIELD	TX
2188V	14418	207	16	48	2	170	08	2	1	2	PANAIR FLYING CLUB	2400 ATRLENE WAY	EAST MEADOW	NY
2188X	1370089	207	57	65	3	415	15	2	2	3	SUN VALLEY AIR SVC INC		PHOENIX	AZ

Figure 8: The registry of Dr. Wahdeddin Turkman on the United States Civil Aircraft List.



Figure 9: The commemorate ceremony published in Kardeşlik magazine (Kirkuk/Iraq) about the loss of Dr. Turkman (Dated: October, 1965).

During our research on Dr. Turkman, we discovered the following certificates: Resident Physician in Neurosurgery at the University of Pennsylvania Hospital (June 1953–1956; Figure 10); Resident in Neurosurgery at The Children’s Hospital of Philadelphia between June 1 and December 31, 1954 (Figure 11); board certification from the American Board of Neurological Surgery (October 1955; Figure 12); Fellow of the American College of Surgeons as qualified in the Art and Science of Surgery (October 1958; Figure 13); and membership to the Congress of Neurological Surgeons (October 1961; Figure 14). Also, in 1957, he was listed as “Wahdettin Turkman” in the directory of Neurological Surgeons in the USA (11).

**Iraq**

Dr. Turkman returned to Iraq after his initial training in the USA to become the modern Iraq’s first known neurosurgeon. Based on our research, he is believed to have founded the Department of Neurosurgery at Baghdad University and worked in private practice in Kirkuk in the late 1950s (14). He performed complex neurosurgical procedures for conditions, such as hydrocephalus, tumors, and trauma, and he was the first in Iraq to use modern neurosurgical procedures.



Figure 10: Certificate of residency as physician in neurosurgery at the University of Pennsylvania Hospital (June 1953–1956).

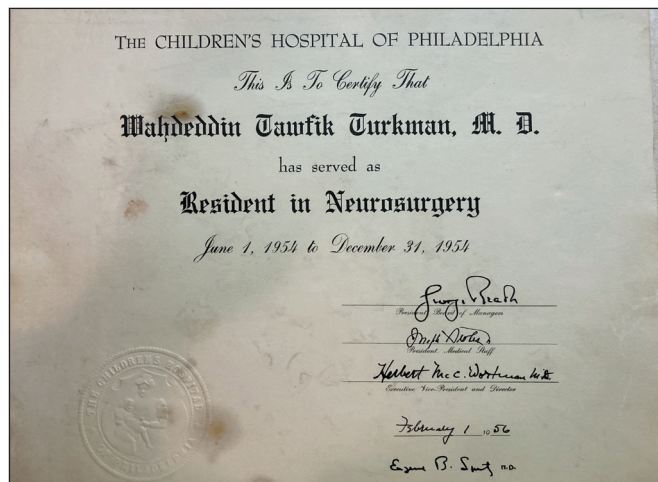


Figure 11: Certificate of residency in neurosurgery between June 1 and December 31, 1954, at The Children’s Hospital of Philadelphia.

**Turkey**

Dr. İhsan Dogramaci, the founder of Hacettepe Children’s Hospital (formerly the “Child Health Scientific and Social Research Institute” in 1956), invited Dr. Turkman to establish the hospital’s neurosurgery department after leaving Iraq (3). Dr. Turkman accepted the invitation, founded the department, and worked in it for the first 10 months (Figure 15) (7). Thus, Dr. Turkman established the first neurosurgery training center in Ankara (the third in Turkey) in 1959 (8).

During the 1958–1959 academic years, this department had great success in many fields of medicine, including neurosurgery. Later on, the institute established two of Turkey’s most important neurosurgery departments at Hacettepe and Ankara Universities. In 1963, Hacettepe School of Medicine became part of Ankara University, and in 1965, it became an independent university led by pioneer neurosurgeons Prof. Drs. Aykut Erbençi and Vural Bertan. Until 1965, Dr. Nurhan

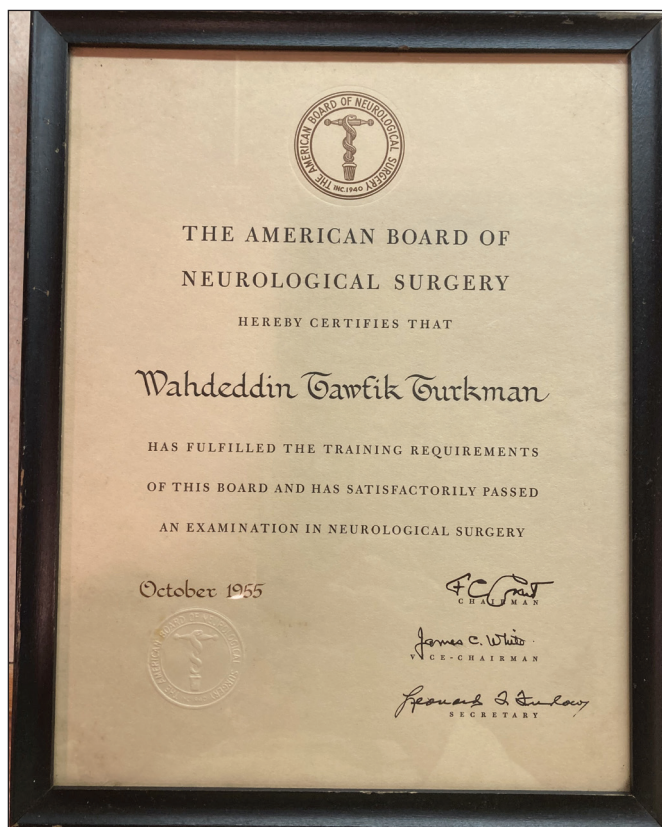


Figure 12: Certificate of the American board of neurological surgery (October 1955).

Avman oversaw the department established by Dr. Turkman (1,3).

Dr. Yuksel Bozer, one of Hacettepe University's former rectors, emphasized that Dr. Turkman established the department and influenced all of his colleagues (2). Dr. Aykut Erbençi, another pioneer of Turkish neurosurgery, stated that Dr. Turkman brought all of his neurosurgical equipment from Iraq in the spring of 1959 to assist in the establishment of the department at Hacettepe University, allowing patients to be operated on as soon as possible (4,5). Dr. Turkman was an exceptional neurosurgeon because of his theoretical knowledge and surgical abilities. Dr. Erbençi emphasized in a letter to Dr. Avman dated June 1, 1960, that neurosurgical operations began due to Dr. Turkman's extraordinary efforts. More than 60 patients were operated on during this time period, including cases of posterior fossa and hemispheric tumors, hydrocephalus, subdural hematomas, and meningocele and myelomeningocele (6,7,12,13). Dr. Turkman coauthored two publications in Turkish on the surgical treatment of hydrocephalus and hemispherectomy that were published between 1959 and 1960 (12,13). The first ventriculoarterial shunt operation in Turkey was also performed by Drs. Turkman and Erbençi (9). In late 1959, Dr. Turkman left Hacettepe for the USA.

**The United States (the Second Period)**

Dr. Vahdettin Turkman worked at Citizens General Hospital in

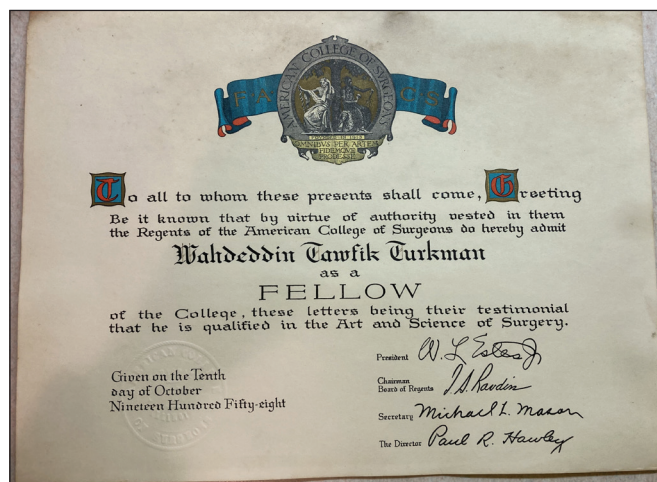


Figure 13: Certificate of fellowship at the American College of Surgeons (October 1958).

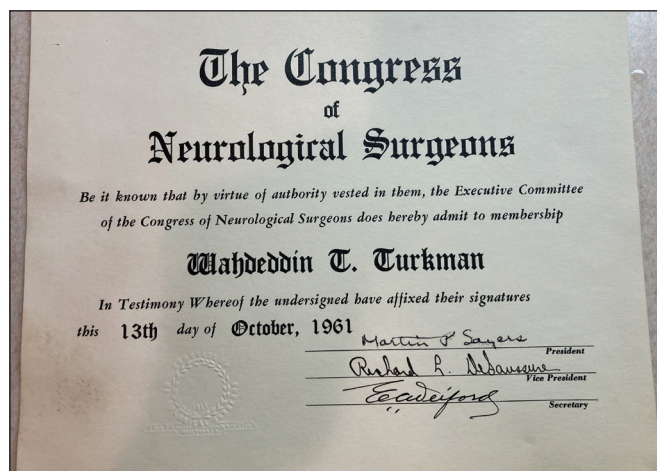


Figure 14: Certificate of membership of the Congress of Neurological Surgeons (October 1961).



Figure 15: An original picture from Dr. Palaoglu's archive signed by Dr. Turkman during his working period at the Hacettepe University.

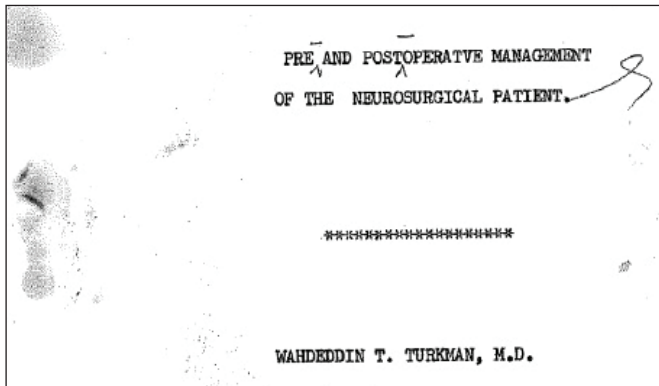


Figure 16: Cover page from the unpublished book by Dr. Turkman.

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Figure 17: Contents page from the unpublished book by Dr. Turkman.

New Kensington, Pennsylvania, and several other hospitals in the Pittsburgh area. Unfortunately, no information could be obtained from the institutions because the registration system in those years was not available today.

Dr. Turkman dedicated nearly all of his time to improving neurosurgical practice and patient care. After his death, a book manuscript titled *Pre and Postoperative Management of the Neurosurgical Patient* was discovered. The contents of chapters, such as “General Considerations,” “Cranial Trauma; Intracranial Space Occupying Lesions,” “Congenital Malformations & Pediatric Problems,” “Spine and Cord Lesions; Procedures for the Relief of Pain,” and “Peripheral and Cranial Nerves,” are reflected on the first pages of the book (Figures 16–18). This unpublished manuscript exemplifies his significant contributions to modern neurosurgical practice and evidence-based patient care.

Dr. Vahdettin Turkman was a wise neurosurgeon who influenced his generation’s approach to more modern neurosurgery. The many successes he achieved in his brief life make us wonder what else he could have done to advance neurosurgery had he lived longer. Today, more than a half-century later, we recognize all of the contributions made by such a fully dedicated outstanding neurosurgeon who contributed to the advancement of neurosurgery from east to west.

Introduction

Although neurological surgery consists for the most part of diagnostic methods and operative procedures, the management of the patient plays an important part in the success and final result. Therefore, better knowledge and acquaintance with this aspect of the subject is very helpful, and is as important as familiarity with operative techniques.

Knowledge of indications for operation, preparation of the patient for operation, and, moreover, post-operative handling of the patient's condition and complications is not only necessary to the neurosurgeon, but will also be of great help to the nurses, interns, residents, and other members of the medical profession. This is especially true where a neurosurgeon is not always available, and in hospitals where a neurosurgical resident is not present.

The management of pre-operative conditions, work-up, and post-operative care of the neurosurgical patient differs in each instance, and in each school. As yet there is no accepted routine or method to be applied universally. In almost every major clinic the abovementioned procedures differ. In this monograph, however, an attempt will be made to outline the methods which have been developed at the Hospital of the University of Pennsylvania after approximately 40 years' experience, and personally observed at other major clinics in this country. I hope this monograph, inspite of being incomplete at the present time, will be of help and guidance to the medical profession in the management of the neurosurgical patient.

Figure 18: Introduction from the unpublished book by Dr. Turkman.

**Obeisance**

We have been inspired by Dr. Turkman’s contributions and achievements as many neurosurgeons trained in Ankara and Hacettepe Universities, Neurosurgery Departments in Turkey, and around the world. We honor Dr. Turkman and pay tribute to his memory.

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**AUTHORSHIP CONTRIBUTION**

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 Data collection: EB, SP  
 Analysis and interpretation of results: EB, SP  
 Draft manuscript preparation: EB, SP  
 Critical revision of the article: EB, SP  
 Other (study supervision, fundings, materials, etc...): EB, SP  
 All authors (EB, SP) reviewed the results and approved the final version of the manuscript.

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